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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,530	04/06/2004	Laszlo J. Keeskes	ARL 03-60	4322

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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02/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/828,530

Applicant(s)

KECSKES ET AL.

Examiner

George P. Wyszomierski

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/30/08 (RCE, Amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-23, 25-27, 32 and 33 is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 11-15, 24, 28-31 and 34-40 is/are rejected.
- 7) ☒ Claim(s) 7, 8 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Final Drawing Review (PTO-849)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 30, 2008 has been entered.

Claim Interpretation

2. Claim 40 recites limitations that are "preferably" present. The examiner notes that prior art that does not include the preferable limitations may nonetheless fully meet the requirements of this claim.

35 U.S.C. 112

3. Claims 24, 29, and 34-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 24 states that "the metallic glass is at least partially amorphous". It is unclear how or whether this further limits the subject matter of the independent claim, as the term "metallic glass" is effectively a synonym for "amorphous metal".

b) Claims 29 and 34 are directed to a "method", but these claims and the claims dependent from them do not recite any steps to be performed in the claimed method.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 9, 11-15, 28, 30, 31, and 34-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Gu et al. Journal of Non-Crystalline Solids article (reference A5 on the IDS filed April 6, 2004).

Gu disclose a bulk metallic glass including (from page 79 and Table 1 of Gu) some combination of Hf, Zr, Ni, Al and Ti. The examiner's position is that if "x" in the formula of Gu is equal to approximately 0.8, then an alloy according to the instant claims would be produced. The Gu alloys have a density and a ratio of glass transition temperature to melting temperature as recited in the instant claims. Gu discloses making samples of the prior art alloys that are 3 mm in their smallest dimension by arc melting and suction casting.

Gu does not disclose any specific example that meets all of the compositional limitations as presently claimed, i.e. Gu does not disclose an example where "x" is 0.8, and does not teach the various eutectic combination(s) stated or implied by instant claims 28 and 34-39. The examiner's position is that page 79, Table 1, and Figs. 2 and 3 of Gu disclose sufficient information to one of skill in the art that all values of "x" between 0 and 1 would fall within the purview of Gu, including those values which would result in the presently claimed alloy compositions.

Thus, a prima facie case of obviousness is established between the disclosure of Gu et al. and the presently claimed invention.

6. In remarks filed with the present RCE, Applicant contends that the claimed invention can be distinguished from Gu in that the intent of Applicants is to produce a metallic glass based on Hf only, and/or that some features of an Hf-base glass render them unexpectedly distinct and unobvious from the compositions disclosed in the prior art. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) The rejected claims do not exclude the presence of additional metals. Independent claims 1 and 34 recite that "Y" comprises or includes one or at least one element selected from among a number of chemical elements, including the Zr as used in the Gu alloys.

b) As to any unexpected difference between the claimed material and that of the prior art, the only evidence of record in this regard (the Declaration by Dr. Kecskes filed October 30, 2008) is not commensurate in scope with the invention as defined in the rejected claims, as indicated in the Advisory Actions mailed November 14 and December 15, 2008.

7. Claims 16-23, 25-27, 32 and 33 are allowable over the prior art of record. Claim 24 would be allowable if rewritten to overcome the rejection under 35 USC 112. Claims 7, 8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or suggest a metallic glass alloy having the compositional limitations required by these claims.

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8. The remainder of the art cited on the attached PTO-892 form is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, *supra*.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Wyszomierski/
Primary Examiner
Art Unit 1793

GPW
February 12, 2009